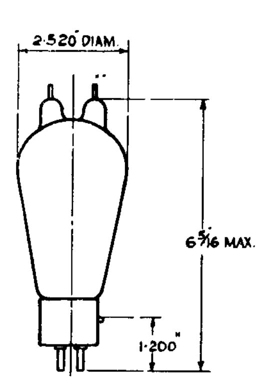
—Standard Valves—

4304-B AND 4304-BB VALVES

TRIODES.

SPECIFICATION.



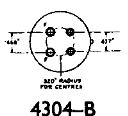
Cathode.

Thoriated Tungsten filament.
Constant voltage type.

Base.

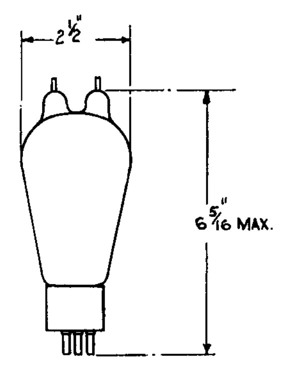
4304-B—American medium 4-pin bayonet
4304-BB—Standard British 4-pin.

Control grid and anode brought out separately at top of bulb.


4304–B

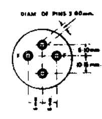
Dimensions.

	4304-B	4304-BB
Overall length	$6\frac{7}{8}$" (17·5 cms.)	$6\frac{7}{8}$" (17·5 cms.)
Diameter	$2\frac{7}{16}$" (6·2 cms.)	$2\frac{1}{2}$" (6·4 cms.)
Net weight	0·15 lbs. (70 gms.)	0·15 lbs. (70 gms.)



Constants.

Filament voltage	7·5 volts
Nominal filament current	3·25 amps.
Total emission	1 amp.
Amplification factor	11
Impedance	5,500 ohms
Grid–anode capacity	2·5 $\mu\mu$F.
Anode–filament capacity	0·7 $\mu\mu$F.
Grid–filament capacity	2·0 $\mu\mu$F.


4304-BB

LIMITING CONDITIONS FOR SAFE OPERATION.

Maximum direct anode voltage	1,250 volts
Maximum direct anode current	0·100 amps.
Maximum anode dissipation	50 watts
Maximum direct grid current	0·025 amps.
Maximum frequency for above ratings	100 Mc.
Maximum anode voltage for frequency of 300 Mc.	750 volts

V.4304-B.1
Nov. 1937

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TYPICAL OPERATING CONDITIONS.

RADIO FREQUENCY OPERATION.

	Class B Telephony		Class C Telephony		Class C Telegraphy		
	Modulated Carrier applied to grid		Subject to anode modulation		Unmodulated		
Direct anode voltage	1,250	1,000	1,000	750	1,250	1,000	volts
Grid bias	—110	—85	—180	—135	—180 —225	—135 —180	to volts
Direct anode current	0·060	0·060	0·100	0·100	0·100	0·100	amps.
Carrier output	25	20	65	50	85	65	watts
Anode dissipation	50	40	35	25	40	35	watts

Ultra High Frequency Operation.

For frequencies above 100 megacycles, the maximum plate voltage must be reduced as follows :—

Frequency	100	150	200	250	300	megacycles.

Anode Voltage :—

Class B Amplifier	1,250	1,125	1,000	875	750	volts
Class C Oscillator or Amplifier—unmodulated	1,250	1,125	1,000	875	750	volts
Class C Oscillator or Amplifier—anode modulated	1,000	900	800	700	600	volts

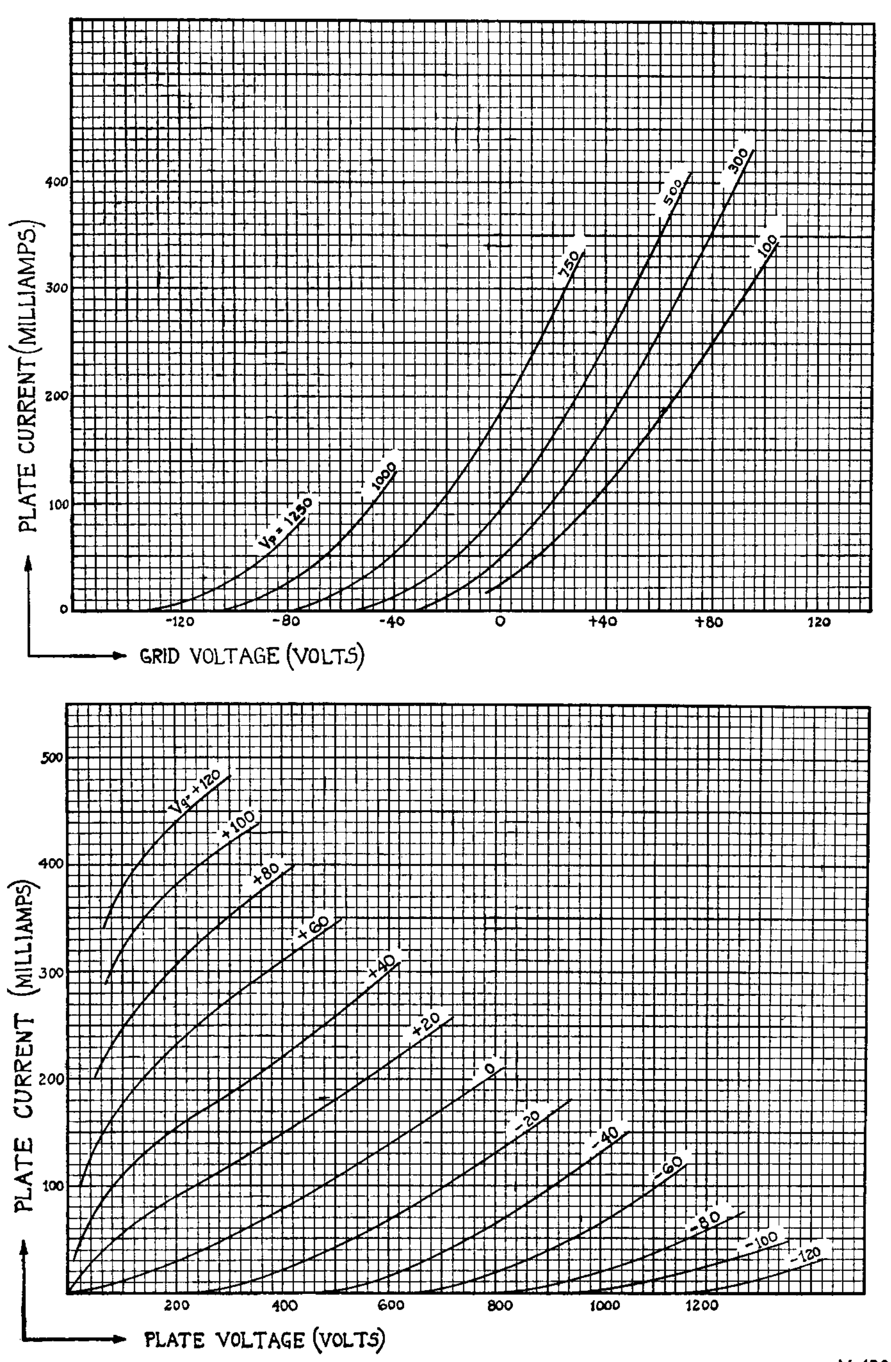
Nominal power obtainable in a load for Class C unmodulated operation is approximately as follows :—

Frequency	100	200	300	megacycles
Anode voltage	1,250	1,000	750	volts
Power output	60	35	13	watts
Efficiency	48	35	17	per cent.

Limit of oscillation, approximately 400 Mc.

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